T I M E X
(P E R P E T U A L)
(C A L E N D A R)

```
        * DIRECTIONS *
7 = MOVE FORWARD ONE MONTH

5 = MOVE BACK ONE MONTH

8 = MOVE FORWARD ONE YEAR

5 = MOVE BACK ONE YEAR

  (SPACE BAR) = DIRECTIONS

OR ENTER NEW MONTH & YEAR

USE (#) KEY TO LPRINT MONT-

ENTER THE MONTH & YEAR DESIRED
---------------------------------
        SEP 1984

   1    M    T    W    T    F    S
                                 1

   2    3    4    5    6    7    8

   9   10   11   12   13   14   15

  16   17   18   19   20   21   22

  23   24   25   26   27   28   29

  30
---------------------------------
```

Happy New Year!

Welcome to 1985! As the new year looks to be another year of suprises here is some news from the vine:

We all hope Rita is doing well after her stay in the hospital. Join me in wishing her a healthy new year.

The East Bay group is looking for a new President. If you are interested, come to the next meeting and let your voice be heard!

T A S W O R D   T W O
R E F E R E N C E   G U I D E

REGULAR CONTROLS

```
     EDIT       HELP MENU
 CAPS LOCK      CAPITALS LOCKED

    ENTER       RETURN (NEXT LINE)

   ARROWS       CURSOR MOVEMENT
 TRU VIDEO      CURSOR BY WORD LEFT
 INV VIDEO      CURSOR BY WORD RIGHT

   DELETE       DELETE CHARACTER
      NOT       DELETE LINE
      AND       INSERT LINE/CHARACTR

      < =       MOVE LINE TO LEFT
      > =       MOVE LINE TO RIGHT
      < >       CENTER LINE

       OR       GO TO END OF TEXT
       AT       GO TO START OF TEXT

       TO       SCROLL DOWN
     THEN       SCROLL UP

     STEP       REFORM PARAGRAPH
     STOP       TO SV/LD/PRNT MENU
```

EXTENDED CONTROLS

```
     EDIT       HELP MENU
   ARROWS       CURSOR MOVEMENT

        F       FAST SCROLL DOWN
        G       FAST SCROLL UP

        A       SET LEFT MARGIN
        D       SET RIGHT MARGIN
        S       RESET NORMAL MARGINS

        C       CHANGE WINDOW
        R       REPLACE OR FIND TEXT

        I       INSERT MODE:   ON/OFF
        W       WORD-WRAP:     ON/OFF
        E       RIGHT JUSTFY:  ON/OFF

        J       JUSTIFY LINE
        H       UNJUSTIFY LINE

        B       MARK TEXT BEGINNING
        V       MARK TEXT END
        M       MOVE TEXT
        N       COPY TEXT

        L       LARGE PRINTING: ON
        K       LARGE PRINTING: OFF
        P       PRINT TEXT

        X       CLEAR TEXT FILE
```

The Jungle Jim by Jim March

You can have more fun with your 1000 or 1500 if you learn how the machine works. For example, by learning how information is stored inside the computer, you can learn how to change the information directly to get the results you want.

This month I continue my discussion of the "display file". I hope you have as much fun as I do making the computer do things which are unconventional, including self analysis!

Display File—Storage Form   In memory there is an area known as the display file. It holds the codes for the characters which appear on the TV or monitor screen. The display file is stored according to strict rules. If these rules are not followed while the display file is being modified, the computer may lose your program.

The display begins at D__FILE. D__FILE is a system variable which holds the start address of the display file. The first character of the display file is always an ENTER (code = 118). From here, there are two ways the display file can be stored.

If you have fewer than 3.25K bytes of RAM (3328 bytes) then each line of display file will vary in length. There must always be an ENTER character

at the end of the line. There are 24 lines in the display. Each byte in the display file holds the code of the character to be printed at that spot in the display. Try this:

```
 5 PRINT "JIM"
10 LET DFILE=PEEK 16396+256*PEEK 16397
20 FOR I=DFILE TO DFILE+20
30 PRINT PEEK I
40 NEXT I
```

Notice the 118's which mark the ends of lines on your screen. Also notice how the screen is constantly being changed as you run a program. This means your display file is expanding and contracting as you PRINT and CLS. If you have more than 3.25K and want to try this, then POKE 16389,72; press NEW ENTER and then enter the program.

If you have more then 3.25K (3327 bytes) memory, then the display file is stored differently. Now you have enough room so that the computer "expands" your display file to the maximum by adding spaces to all the lines. Each line has 32 bytes, then ends with an ENTER (118). Try this:

```
10 PRINT "JIM"
20 LET DFILE=PEEK 16396+256*PEEK 16397
30 FOR I=DFILE TO DFILE+100
40 PRINT PEEK I;"[ ]"
50 NEXT I
```

Note: [ ] enclosed is displayed in reverse video.

Notice all the spaces. Since each line is kept at 32 characters across plus the ENTER(118) character, the display file for machines with more than 3.25K remains a fixed size: the ENTER character at the start of the file, then 24 lines of 32+1 (ENTER) characters. This uses 1+24(32+1) = 792 bytes. The display file always takes up 792 bytes. However, it still moves around in memory each time you change a line in your program. See Memory Map. Knowing where your display file is and how it is stored is essential if you want to do Assembly language programming.

HARDWARE REVIEW

TYPE:	A & J MODEL 2000 STRINGY FLOPPY
PURPOSE:	Mass Storage Device
FROM:	Knighted Computers
	707 Highland Street
	Fulton, NY 13069
	PH. 315-593-8219

For some reason my programs always use all of the 38K RAM on my TS 2068 computer so I looked forward to the arrival of the A & J Micro Drive which I purchased for $203.00, delivery included. Since then, I have found it could be bought for about $30.00 less at Pheonix Enterprises, 1788 N. Dupont Hywy. #17, Dover, Delaware 19981 (PH. 302-734-8179). In any event, this Micro Drive and interface is far cheaper than a disc drive and operates at 11,400 BAUD. I can load a 38K program in 45 seconds which is about 1/4 the time it took me using a cassette recorder. You can VERIFY your SAVES, SAVE CODE, SAVE DATA, everything else that you can do with a cassette recorder.

The interface plugs into the back of the TS 2068 and has convenient 18" long ribbon. You can piggyback your Modem and TS 2040 printer onto the interface.

CAUTION, do not connect your TS printer to the edge connector on top of the interface. Apparently, this port was meant for a Centronics printer and requires additional hardware to work (See Page 5, TSS NEWSNOTES DEC. 1984). The A & J Manual is easily understood, however, it does not tell you anything about the printer port. You can modify your programs in less than a minute to utilize the Stringy Floppy and it does not use any of your RAM. Knighted Computers also enclosed some additional information on how to convert auto start programs as well as Tom Wood's Pro/file so they can be SAVED.

This unit comes with five wafers which have a capacity of 14, 28, 49, 70 and 85K. I prefer the 35' wafers which can store 49K and can be purchased for $4.25 each. I think someone can run a mini-BBS using the 62' wafer that stores 85K.

The bad news is I could not get the Floppy to work after I installed a Spectrum ROM chip. The Manual does not tell us the source code and maybe someone could figure out how to make this work.

I couldn't help but to compare this Micro Drive with the Stringy Floppy's from C.A.I. Instruments I have been using on my TS 1000 for two years. They are not interchangeable and the Model 2000 does not require you to put a lot of POKE's and USR calls in your program to make it work.

The unit has a 90 day warranty and I would strongly recommend its purchase.

Phil McConaghey, P.E.
Pembroke Pines, FL 33023

```
200 REM
201 REM
202 REM
203 REM
300 REM ‡‡A NEW HELPFUL HINT‡‡
302 REM
304 REM ‡‡2068/SPECTRUM SCROLL‡
‡
306 REM
310 REM THE TS1000 SCROLL COMMA
ND CAN BE DUPLICATED ON THE 2068
WITH: RANDOMIZE USR 2361.
312 REM
320 REM THE ZX81 SCROLL COMMAND
CAN BE DUPLICATED ON SPECTRUM W
ITH: RANDOMIZE USR 3582
```

Perpetual Calendar Program

In the November issue of Timelinez
we printed the Timex Perpetual
Calendar program on page 86. How-
ever, we forgot to print the lines of
the program after line 460. So, if you
will bear with us, here is the whole
program.

[Thanks to Jay Brockman, 713 San
Juan #3, Sunnyvale, CA. 94086, for
sharing this program with us].

Here's something special for
you to do. A calendar. A
special TIMEX perpetual
calendar that will mark all
the meeting dates in this area.

I needed one for my TS2068 so
I keyed one in. The formulas
I got from someplace else, but
the print formatting is my own.

When the program signs on,
there is only one option, and
that is to key in a month and
year such as -JAN1984- with no
spaces. The computer must be
in the upper case mode.

After you have keyed in the
month, you must press ENTER,
then the month of your choice
will be displayed. When the
month is on the screen you then
have 5 options. You may, with
with the arrow keys advance a
month, go back a month, advance
a year, or go back one year.
The 30 key will COPY the screen
for you.

For those that don't want to
key this in, a copy will be
avaiable to you from me for
a measly $3.50. Add .50 for
mail order.

In LINE 460, the SMTWTF
should be in inverse, use the
shift 4 before, and shift 3
after each letter with three
spaces at the beginning and 3
spaces betweeen each letter.
In LINEs 490 thru 495, the
spaces within the ""has to be th
e GRAPHIC shifted 8.

```
10 REM (c) 1984 BY JAY K BROCKM
AN Version 4.0
29 RESTORE
30 CLS : DIM H(7): DIM N$(12,3)
: DIM D(12): DIM A$(15)
31 LET I=0
32 FOR J=1 TO 7
33 READ H(J)
34 NEXT J
35 DATA 3,7,11,15,19,23,27
40 FOR a=1 TO 12
50 READ n$(a),d(a)
60 NEXT a
70 DATA "JAN",31,"FEB",28,"MAR"
,31,"APR",30,"MAY",31,"JUN",30,"
JUL",31,"AUG",31,"SEP",30,"OCT",
31,"NOV",30,"DEC",31
```

```
100 CLS : PRINT TAB 10;"T I M E
X": PRINT TAB 5;"< P E R P E T U
A L >": PRINT TAB 5;"< C A L E
N D A R >": PRINT : PRINT TAB 7;
"* DIRECTIONS *"
120 PRINT "7 = MOVE FORWARD ONE
MONTH": PRINT
130 PRINT "6 = MOVE BACK ONE MON
TH": PRINT
140 PRINT "8 = MOVE FORWARD ONE
YEAR": PRINT
150 PRINT "5 = MOVE BACK ONE YEA
R": PRINT
160 PRINT " (SPACE BAR) = DIRECT
IONS": PRINT
170 PRINT "OR ENTER NEW MONTH &
YEAR": PRINT
180 PRINT "USE <0> KEY TO LPRINT
MONTH"
185 PRINT : PRINT "ENTER THE MON
TH & YEAR DESIRED"
190 INPUT M$: LET Y=VAL M$(4 TO
7)
200 FOR X=1 TO 12
210 IF M$(1 TO 3)=N$(X) THEN LE
T M=X
220 NEXT X
240 IF Y<1 THEN GO TO 30
250 LET D=1
260 LET C=INT ((Y-1)/100)
270 LET D=D+C*36524
280 LET D=D+INT (C/4)
290 LET N=(Y-1)-C*100
300 LET D=D+N*365
310 LET D=D+INT (N/4)
320 IF Y/100<>INT (Y/100) THEN
GO TO 340
330 IF Y/400<>INT (Y/400) THEN
GO TO 360
340 IF Y/4<>INT (Y/4) THEN GO T
O 360
350 LET L=1
360 IF M=1 THEN GO TO 410
370 FOR I=1 TO M-1
380 LET D=D+D(I)
390 IF I=2 THEN LET D=D+L
400 NEXT I
410 LET F=D-7*INT (D/7)+1
440 IF M<>2 THEN LET L=0
445 CLS : PRINT "---------------
-----------------"
450 PRINT TAB 11;N$(M);" ";Y
460 PRINT : PRINT " S  M  T
 W  T  F  S"
475 LET J=F: LET K=0: LET AA=F:
LET PO=0: LET PP=0
476 IF AA=1 THEN LET PO=1: LET
K=1
477 IF AA=2 OR AA=3 OR AA=4 OR A
A=5 THEN LET PP=1

480 FOR D=1 TO D(M)+L
490 IF (k=3 AND j=1) THEN PRINT
INVERSE 1; INK 2;TAB 0;" P";d
; INVERSE 0;: LET j=j+1: GO TO 5
00
491 IF PP=0 THEN IF (k=3 AND j=
5) THEN PRINT INVERSE 1;TAB 17
;" E";d; INVERSE 0;: LET j=j+1:
GO TO 500
492 IF PO=0 THEN IF (k=4 AND j=
3) THEN PRINT INVERSE 1;TAB 9;
" S";d; INVERSE 0;: LET j=j+1: 6
0 TO 500
493 IF PO=1 THEN IF (K=5 AND J=
3) THEN PRINT INVERSE 1;TAB 9;
" S";D; INVERSE 0;: LET J=J+1: 6
0 TO 500
494 IF PP=1 THEN IF (K=2 AND J=
5) THEN PRINT INVERSE 1;TAB 17
;" E";D; INVERSE 0;: LET J=J+1:
GO TO 500
495 IF (PO=1 AND D(M)=30) THEN
IF (K=4 AND J=3) THEN PRINT IN
VERSE 1;TAB 9;" S";D; INVERSE 0;
: LET J=J+1: GO TO 500
496 PRINT TAB h(j);d;
497 LET j=j+1: IF j=8 THEN LET
J=1: PRINT : PRINT : LET k=k+1
498 IF PO=1 THEN IF K=6 THEN L
ET K=0

499 IF PO=0 THEN IF K=5 THEN L
ET K=0
500 IF (D+F-1)/7<>INT ((D+F-1)/7
) THEN GO TO 520
520 NEXT D
525 PRINT : PRINT "-------------
--------------------": PRINT : PR
INT
530 LET L=0
550 LET M=0: LET X=0: LET Z=0
565 IF IN 63486=27 THEN GO SUB
800
570 IF IN 61438=15 THEN GO TO 7
10
580 IF IN 61438=23 THEN GO TO 7
40
590 IF IN 63486=15 THEN LET Y=Y
-1: GO TO 230
600 IF IN 61438=27 THEN LET Y=Y
+1: GO TO 230
610 IF IN 32766=30 THEN GO TO 1
00
620 GO TO 565
710 LET M=M-1
720 IF M=0 THEN LET Y=Y-1: LET
M=12
730 GO TO 230
740 LET M=M+1
750 IF M=13 THEN LET Y=Y+1: LET
M=1
760 GO TO 230
800 COPY : RETURN
```

The reason I am writing is because of a few changes to the RIVER CITIES SMART BBS. First, we just acquired a 10mg hard-disk for the system, giving us almost unlimited room to make RIVER CITIES the BEST board in the United States!

About a month ago we had the system crash because of a power surge. This made us rebuild the system from scratch. However, this gave us the opportunity to make the board EVEN BETTER! We took the features we liked, and added other ideas we had, like a complete ONLINE GAMES area. Where else do you know of a board that can offer "Zork" online? Or simulate the computer scenes from "WARGAMES"?

I took the opportunity to make the T/S SIG better, too. I added more features to the T/S Information Center, opened a very large Download section (we will even have programs for the 1000/1500 !), and monthly drawings will be held for T/S products.

Now for a little bad news. Because of the expenses we have incurred running this board (2 seperate phone lines, $1000.00 for the extra hard-disk, etc.), we are going to have to ask for a small one-time Lifetime Membership Fee. All of the money we get will go into making the board even better; none of the money will go to us. We want to make RIVER CITIES a nationally-known source for T/S users.

Sincerely,

Bill Ferrebee

Bill Ferrebee
MOUNTAINEER SOFTWARE

Dear Timelinez

By now you will have had some experience with the Romswitch. I am eagerly waiting for delivery on mine and have a question on it - hope you have the answer! Have you used it with the Aerco interface and have there been any problems with it? If there were problems do you have the solutions.

I'm running my 2068 on RGB. When using the schematic for the RGB board in the 2068 Tech. Manual, if everything works except the screen is doing a fast horizontal roll (and the horizontal control is inside the monitor, as it is on most of them) I have found that changing the wiring from the negative to the positive horizontal on the board (or vice versa) will stop the roll.

Is there anybody out there that has had experience with both Grafist and Multi-Draw 2068 and could give a review on them?

I'm working my way through the Timex Sinclair 2068 Intermediate/Advanced Guide by Nazur and would be happy to provide Timelinez with a review if nobody else is doing so.

J. Cohen
POB 1240
Mendocino, 95460

Joanne

PROGRAM FOR THE SMART II SOFTWARE FOR 2068
BY PHIL McCONAGHEY

First enter the loading program shown below. SAVE the program to tape by GOTO 9 and ENTER. Remove the tape without rewinding, and put the SMART II tape in the recorder. Load as per the instructions provided. Remove the SMART II tape and put the first cassette back in. SAVE the SMART II by entering:

SAVE "MTERM II" CODE 54016, 11420

(You are allowed to make one copy for your use)

After saving press ENTER press C and make your settings; enter phone numbers etc. I have found Duplex "FULL", Parity "EVEN", WORDSIZE "7", and stop Bits "1" connects me to all BBS's. I set the Line Feed Suppression and carriage return to "OFF" and the conversion to "NONE" (see Buffer Menu).
Save the phone numbers by going to the MAIN MENU, and press S. Then press S and ENTER after starting your tape.

The next time you decide to use your modem, load the Loading Program and press RUN at the prompt, after the MTERM II is loaded, stop the tape, press ENTER, S and L. Start the recorder and press ENTER to load the settings and phone number.

I have not been able to transmit the Buffer probably because I can't figure out what to enter for the "Prompt String".

Finally, Lines 4 and 5 of the Loading Program "cleans up" the addresses from 61714 to 63264 where the phone numbers and settings are stored. Lines 1, 11 through 13 were developed by Linda Banta of Banta software.

LOADING PROGRAM

```
1 REM FLASH CLS G THEN LN ()
2 LET X=VAL "54015"
3 LOAD ""CODE X
4 FOR N=VAL "61714" TO VAL "6
3264"
5 POKE N,32: NEXT N: GO SUB V
AL "15"
7 PRINT USR X: STOP
9 SAVE "MTERM" LINE VAL "10"
10 INK 2: FLASH SGN PI: PRINT
AT 8,4;"Press ""RUN"" THEN ""ENTE
R""": FLASH NOT PI
11 LET p=VAL "USR (5+PEEK 2362
5+256+PEEK 23636)": LET Y=VAL "1
6383"
12 IF p>Y THEN PRINT AT 12,8;"
PRINTER OFF"
13 IF p<Y THEN PRINT AT 12,8;"
PRINTER ON"
14 GO SUB VAL "15": STOP
15 LET Z=VAL ".042": LET U=VAL
"5"
16 FOR n=SGN PI TO U
17 BEEP Z,2+U: PAUSE 2.8: BEEP
Z,U
20 NEXT n: RETURN
```

JOYSTICK PORT MODIFICATION FROM THE T/S USERS GROUP OF CINCINNATI.

Well, it's been a while, but I finally brushed the dust off the table and decided to get back to work. At the October meeting, I demonstrated a simple modification to a 2068 to allow a trakball (ATARI compatable) to work through the player 2 joystick port (Figure 1). Timex made one change in the joystick input, possibly making it an output port as well to control their microdrive. Pin 7 is shown in the Third Party manual as an select line that goes to a logical low state when a joystick input is required by a program. This is fine to drive a joystick, but doesn't work for a trakball because it expects that line to go to ground. All that you have to do to make it work is to break the trace running from pin 7 of the joystick connector and run a jumper from pin 7 to ground (Pin 29 of the Z-80 Processor will do nicely). This will not affect the joystick performance.

TIMELINEZ NOTE:

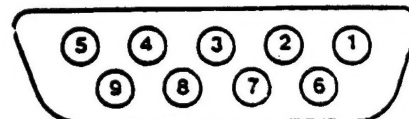We have also used this modification for a CARDKEY numeric keypad.

EDITOR'S NOTE:

If you turn the trakball over, you have a mouse!!!!

JOYSTICK CONNECTOR SIGNAL ASSIGNMENT

P/N	SIGNAL NAME	I/O PORT BIT	FUNCTION
1	DIR1	0	STICK UP
2	DIR2	1	STICK DOWN
3	DIR3	2	STICK LEFT
4	DIR4	3	STICK RIGHT
5	---	---	not used
6	BUTTON	7	PUSH BUTTON
7	5V	=	5 VOLT POWER
8	READ STROBE	---	ADDRESS BIT 8 OR 9*
9	GND	---	POWER GROUND

*When Address Bit 8 is high, the READ strobe to the left joystick is driven low. When address bit 9 is high, the READ strobe to the right joystick is driven low.

TS 2068 PROGRAMMING
by John Roach

FROM THE SINC-LINK N/L OF TORONTO, ONTARIO.

Recognizing UDG's

As you know from the manual, there are 21 User Defineable Graphic characters which can be assigned from CODE 144 to CODE 164. To show what you are doing and to keep program LISTing as clear as possible, it's best to use the CHR$ function rather than shifting to the Graphics mode.

    10 PRINT CHR$ 144; CHR$ 145; CHR$ 146

It's instantly recognizable as UDG's.

UDG Loader

This routine is not in the manual but it saves a lot of typing time not using all the BIN values.

    9000 FOR q=144 TO 164   (or less)
    9010 FOR n=0 TO 7
    9020 READ a : POKE USR CHR$ q + n,a
    9030 NEXT n
    9040 RESTORE : RETURN
    9050 DATA.............

Each data statement contains 8 numbers per line; each number is the decimal value for the binary bits in UDG character row. Each data statement defines one character.

Fancy Titles

Assign a string to T$ less than or equal to 32 characters for the title and a value to the variable "pa" less than 22 for PRINT AT line number:

    10 LET T$ = "HERE IS A PROGRAM TITLE"
    20 LET pa = 10
    30 GOSUB 100
    40 STOP

    100 LET M = LEN T$: IF M/2 < > INT (M/2) THEN LET T$ = T$ + " "
    : LET M = M +1
    110 FOR N = 1 TO M/2 : PRINT AT pa, 16-N; T$ (TO N); T$ (M - N +
    TO) : BEEP .02,2 * N : NEXT N : RETURN

FROM THE SUM T/S N/L OF GAINESVILLE, FL.

FLASH!
POKES FOR SPECTRUM ROM
TASWORD WITH AERCO

For those who have converted their 2068s to run with the Spectrum ROM there is good news! Joe Williamson has discovered the pokes necessary to run the Spectrum version of Tasword II with the Aerco interface.

First load the Aerco software then the Tasword II program. Get into BASIC by holding down on the 'symbol shift key and pressing STOP. Select Basic from the menu then type in the following pokes without line numbers, pressing enter after each line.

    POKE 57999,127
    POKE 58004,98
    POKE 58008,127

Now return to Tasword II with RUN and ENTER. Save your new version of Tasword II as offered by the same menu which got you into Basic.

-- Richard Cravy

NEW COMPUSERVE GUIDEBOOK SAVES TIME AND MONEY FOR SUBSCRIBERS
by
Norm Lehfeldt

Whether you are an old hand on Compuserve or a neophyte intimidated by what appears to be an impenetrable electronic labyrinth, you will find something of value in "How To Get The Most Out Of Compuserve," a new Bantam book by Charles Bowen and David Peyton.

The authors are not only experienced users of the giant data base, but also veteran SYSOPS (SYstem OPeratorS). Their book has chapters which alternate between those designed to be step-by-step guides to various sections of Compuserve while you are on-line and those which are leisurely explanations of what you have seen on your screen during the on-line sessions.

One of the ways in which this book excels over Compuserve's own publications is in its explicit directions for getting OUT of various sections of the network in an orderly fashion after you have gotten IN.

If you are a newcomer to tele-computing, this book will speed up your progress considerably by showing you how to dispense with Compuserve's time- and money-consuming menus as you become more adept. An especially useful feature of the book is an appendix dubbed "On-line Survival Kit." Even if you are an experienced Compuserve navigator you will find this quick-reference listing of the most useful commands invaluable while you are on-line.

You can order this book from the on-line ordering section of Compuserve, but it is also available in the computer sections of major book stores.

COMPUTER CALENDAR

FEBRUARY 1985

16 California Computer Swap
    Alameda County Fairgrounds

17 Peninsula User Group
    (415)359-3198 1 p.m.

21 East Bay Z80 User Group
    (415)234-3310 7:30 p.m.

26 Silicon Valley TS User Group
    (408)738-2888 X4536 7 p.m.

MARCH 1985

2-3 Computer Supermarket Show
     San Mateo County Fairgrounds
     10 - 5pm $7 (415)340-9113

17   Peninsula User Group
     (415)359-3198 1 p.m.

21   East Bay Z80 User Group
     (415)234-3310 7:30 p.m.

26   Silicon Valley TS User Group
     (408)738-2888 X4536 7 p.m.

30- The 10th West Coast Computer
Apr Faire   Moscone Center, SF
2   (617)965-8350

TIMES AND LOCATIONS MAY DIFFER, PLEASE CALL FIRST

2068 ROM Disassembly

Rumor has it that Bob Orrfelt of the Peninsula group has disassembled the 2068 ROM. His listing includes some comments and the Z80 code. How about some articles on the code? Or how a disassembly is done? What is a disassembly, anyway? How about it, Bob?

E B Z U G
East Bay Z80 User Group
654 40th Street
Richmond, CA 94805
(415) 234-3310 or 531-6566

PRESIDENT   Joel Brody
NEWSLETTER EDITOR Rick Link

EBZUG meets the third Thursday
of each month at:

WEST BRANCH BERKELEY PUBLIC
LIBRARY at the corner of
University and San Pablo.
Meetings start at 7:30 pm.
Bring equipment and power
strips.

UPCOMING MEETINGS
February 21, 1985
March 21, 1985
April 18, 1985

PENINSULA USER GROUP - PUG
263 Gateway No. 107
Pacifica, CA 94044
(415) 359-3198 or 333-2231

PRESIDENT   George Mockridge
LETTER EDITOR   George Mockridge

PUG meets the third Sunday
of each month at:

PENINSULA HOSPITAL, 1783 EL
CAMINO, BURLINGAME. 1 pm.
Meet room on lower level. Use
North entrance. Bring equip.
& extension cords if possible.

UPCOMING MEETINGS:
February 17, 1985
March 17, 1985
April 21, 1985

Silicon Valley SINCLAIR/TIMEX
User Group (SVS/TUG)
P.O. BOX 4133
Santa Clara, CA 95054-0133
(408) 738-2888 X4536

PRESIDENT   Rita Carr
NEWSLETTER EDITOR Bill Miller

SVS/TUG meets the last Tuesday
of each month at:

Dysan Corp. Headquarters
5201 Patrick Henry Drive
Santa Clara, CA
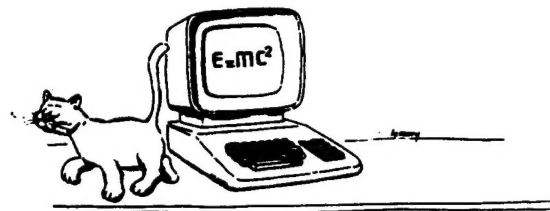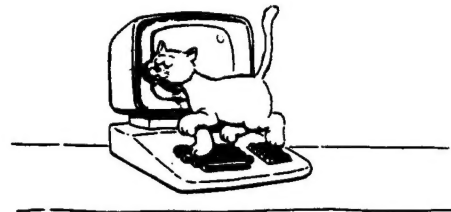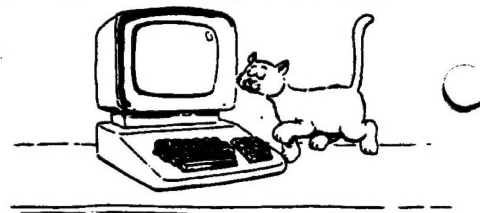
(Please use North entrance
by the loading dock)

UPCOMING MEETINGS:
February 26, 1985
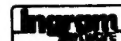March 26, 1985
April 30, 1985

```
1 REM **TEST-BIT SUBROUTINE**
2 REM BY JACK DOHANY
3 REM (415) 321-7684
4 REM
5 REM THE SUBROUTINE AT 100
ALLOWS USER TO DETERMINE WHETHER
A PARTICULAR BIT OF A SPECIFIED
BYTE IS ON(1) OR OFF(0).
6 REM ADJUST LINE 110 FOR
1000/2068.
8 REM LINES 10-80 DEMONSTRATE
USE OF SUBROUTINE.
9 REM
10 CLS
20 PRINT AT 21,0;"ADDRESS:(0-6
5535) ";
30 INPUT ADDR
32 LET ADDR=INT ADDR
34 IF ADDR<0 OR ADDR>65535 THE
N GO TO 30
36 PRINT ADDR
40 PRINT "BIT:(0-7) ";
50 INPUT BIT
52 LET BIT=INT BIT
54 IF BIT<0 OR BIT>7 THEN GO T
O 50
56 PRINT BIT
60 LET BYTE=PEEK ADDR
70 GO SUB 100
72 PRINT "LOC ";ADDR;" CONTAIN
S DECIMAL ";BYTE
74 PRINT "BIT ";BIT;" = ";TEST
76 PRINT
78 PRINT
80 GO TO 20
97 REM
98 REM
99 REM
100 REM ****TEST-BIT****
102 REM NEEDS BYTE=0-255
103 REM NEEDS BIT=0-7
104 REM GIVES TEST = 0 OR 1
105 REM
110 LET X=INT (BYTE/2↑BIT)
112 REM TS1000:↑ = **
113 REM (↑ = RAISE TO POWER)
120 LET TEST=X-INT (X/2)*2
130 RETURN
```

"Softsmiles"©

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[Ingram]

FOR TS 2068 OWNERS, HERE IS A
INTERESTING LITTLE PROGRAMMING
TECHNIQUE. IT IS BASED UPON AN
ARTICLE BY MARK FENDRICK.

```
10>INPUT "ENTER SOME WORDS ";A
$
20 INPUT #0;"ENTER ""2"" FOR S
CREEN OR          ""3"" FOR
PRINTER   ";S
30 PRINT #S;A$''
40 GO TO 20
```

WALT GABY

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